```
-> b reg
FILE 'REGISTRY' ENTERED AT 13:15:01 ON 01 SEP 2009
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  STRUCTURE FILE UPDATES:  31 AUG 2009  HIGHEST RN 1178609-15-8
  DICTIONARY FILE UPDATES: 31 AUG 2009  HIGHEST RN 1178609-15-8

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REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

-> d que sta 110
L1          1 SEA FILE=ZCAPLUS SPE=ON  ABB=ON  PLU=ON  US20070167459 /PN
L2            TRANSFER  PLU=ON  L1 1- RN :    1829 TERMS
L3       1829 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L2
L6            STR

  Hy∽Hy∽G1        N∽G2∽Hy        N∽∽N        N∽G3∽N        N∽Hy
   1   2   3       @4  5   6       @7  8       @9 10  11      @12 13


  N∽G3∽Hy
 @14 15  16

VAR G1-4/7/9/12/14
REP G2={0-3} C
VAR G3=AK/CB
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
ECOUNT  IS E6 C  E1 N  AT   1
ECOUNT  IS E4 C  E2 N  AT   2
ECOUNT  IS M3-X6 C  E1 N  AT   6
ECOUNT  IS M1 N  AT  13
ECOUNT  IS M1 N  AT  16

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  16

STEREO ATTRIBUTES: NONE
L7       10275 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  (NC6 AND NCNC3}/ES
L8        1375 SEA FILE=REGISTRY SPE=ON  ABB=ON  PLU=ON  L7 AND L3
L10       1367 SEA FILE=REGISTRY SUB=L8 SSS FUL L6

100.0% PROCESSED    1375 ITERATIONS                    1367 ANSWERS
SEARCH TIME: 00.00.01


-> b zcap
FILE 'ZCAPLUS' ENTERED AT 13:15:07 ON 01 SEP 2009
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FILE COVERS 1907 - 1 Sep 2009 VOL 151 ISS 10
FILE LAST UPDATED: 31 Aug 2009 (20090831/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

ZCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2009.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAplus family
of databases have been updated to include new citing references
information. This enhancement may impact record import into
database management software. For additional information, refer
to NEWS 9.

=> d bib abs hitrn fhitstr 112 tot

```
AN    2006:363601  SCAPLUS
CN    144:C0844O
TI    Method for measuring cell migration activity
IN    Shibuyama, Shiro; Sasada, Kazuhisa; Watanabe, Noriki; Sugiyama, Tetsuya
PA    Ono Pharmaceutical Co., Ltd., Japan
SO    PCT Int. Appl., 17 pp.
      CODEN: PIXXD2
DT    Patent
LA    Japanese
FAN.CNT 1
PI    NO—2006163506        A1    20061027     2006W0-29001929?    20091019
          W    AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BY, BZ, CA, CH,
                CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
                GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ,
                LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ,
                NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE,
                SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN,
                ZA, ZM, ZW
          RW    AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
                IS, IT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
                CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AM, AZ,
                BY, KG, KZ, MD, RU, TJ, TM
PRAI 2005JP-00192060    A    20051020
```

AB   A method is provided for measuring the cell migration activity
corresponding to the function of a specific cell migration inducer in
vitro. The method comprises: (1) a process for transferring cells
producing a cell migration inducer (e.g., MDC, SDF-1) into an air-grown
produced under a rain of a mammal (e.g., mouse); (2) a process for
transferring the cells producing the cell migration inducer into a
macrophage, granulocyte; into a site other than the air-pouch of the
mammal; (3) a process for recovering the cells in the air-pouch; and (4) a
process for measuring the number of the cells to be measured in the recovered
cells. Also provided are a method for evaluating a cell migration
inhibitory compound possessing a specificity or selectivity to that using
the above method, and a method for producing the above cell migration
inhibitory compound.

```
IT    718981-41-4
      RL:  BIO (Biological study, unclassified); BIOL (Biological study)
           (method for measuring cell migration activity)
IT    718981-81-8
      RL:  BIO (Biological study, unclassified); BIOL (Biological study)
           (method for measuring cell migration activity)
RN    718981-41-4  SCAPLUS
CN    Methanone, cyclohexyl[(3S)-3-[[4-(hexahydro-1H-azepin-1-yl)-2-
      pyrimidinyl]amino]-1,4'-bipiperidin]-1'-yl]-    (CA INDEX NAME)
```

Absolute stereochemistry.


```
OSC.G  1     THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
RE.CNT  4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE FN FORMAT
```

```
AN    2004:913497  SCAPLUS
CN    141:71446
TI    Preparation of nitrogen-containing heterocyclic compounds as CXCRs
      regulators
IN    Nakanishi, Hiromu, Kokoto, Masaya; Shibayama, Shiro; Yada, Hideaki;
      Ianisiro, Tetsuya
PA    Ono Pharmaceutical Co., Ltd., Japan
SO    PCT Int. Appl., 443 pp.
      CODEN: PIXXD2
DT    Patent
LA    Japanese
FAN.CNT 1
```

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PI    NO—2004102963        A1    20041104     2003W0-0P011719    20031209
          W    AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
                CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
                BE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
                LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
                NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM,
                TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
          RW    BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
                BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
                ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
                TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
AD—2003288956        A3    20041020     2003W0-0P011719    20031209
RP—-1671114          A3    10050007     2003EP-00778763    20031209
          P     AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, BE, FR, BE,
                ID, RU, US, SN, AT, RU, MM, CC, BE, TR, BW, BW, RO
UB—2007036749        A3    20070729     2003US-00138759    20031209
          P     DE, SN, AT, RU, LI, AG
DI1129-0001A7408     A     20020806
DI1129-0001A1716     A     20020806
AE—2006-00115719     S     20031020
```

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN L&SG DISPLAY FORMAT

```
GS    MARPAT (c) 71555
```

AB   Compds. such as pyrimidine and quinazoline deriv. represented by the
following general formulas (I) and (II), salts thereof, N-oxides thereof,
solvates thereof or prodrugs of the same (wherein the ring A represents an
optionally substituted nitrogen-containing heterocyclic ring D represents
an optionally substituted homocyclic or heterocyclic ring; X represents
arbitrary; Y represents an optionally substituted hydroxcaryl group, an
optionally substituted heterocyclic group, an optionally protected amino
group, an optionally protected hydroxyl group or an optionally protected
mercapto group; and T represents the ring R or an optionally substituted
amino group are prepared. These compds. are CXCRs regulators, in particular
CXCR4 antagonists and useful as preventives and/or remedies for various
inflammatory diseases, immune diseases, various allergic diseases,
infectious diseases, acquired immunodeficiency syndrome, infection with
human immunodeficiency virus, psoriaodyor diseases, arteriosclerosis, etc.
The compds. prepd. from intermediates, metabolites, etc., for use of medical
and agents for regeneration therapy, in particular transplant therapy. An
assay system using SDF-1 which is an endogenous ligand of CXCR4 receptor,
instead of HIV, was used in an assay for screening compds. which inhibit
the binding of HIV to CXCR4 or CCR4 receptors on US4-pox cells. All the
compds. prepd. showed inhibitory potency against the SDF-1 binding of
[125I]human SDF-1 to CXR cells, more specifically 0.1 uM for
2-(1-benzhydrylpyridin-3-ylamino)-6-(pentydrorazepin-3-yl)pyrimidine As
ample and useful formulation containing
2-(1-dimethylamino)ethyl)amino)-6-(pentydrorazepin-3-yl)pyrimidine were
described.

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IT    718978-34-68        718978-30-4P        718978-43-9P
      718978-46-0P        718978-46-4P        718978-70-4P
```

L12 ANSWER 2 OF 2 ZCAPLUS COPYRIGHT 2009 ACS on STN   (Continued)

RL DAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(prepn. of nitrogen-contg. heterocyclic compds. as CXCR4 antagonists
for prepn. and treatment of diseases)

(dense columns of CAS registry numbers)

L12 ANSWER 2 OF 2 ZCAPLUS COPYRIGHT 2009 ACS on STN   (Continued)

RL DAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(prepn. of nitrogen-contg. heterocyclic compds. as CXCR4 antagonists
for prepn. and treatment of diseases)

(dense columns of CAS registry numbers)

L12 ANSWER 2 OF 2 ZCAPLUS COPYRIGHT 2009 ACS on STN   (Continued)

RL DAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(prepn. of nitrogen-contg. heterocyclic compds. as CXCR4 antagonists
for prepn. and treatment of diseases)

(dense columns of CAS registry numbers)

L12 ANSWER 2 OF 2 ZCAPLUS COPYRIGHT 2009 ACS on STN   (Continued)

RL DAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)
(prepn. of nitrogen-contg. heterocyclic compds. as CXCR4 antagonists
for prepn. and treatment of diseases)

(dense columns of CAS registry numbers)

L12 ANSWER 2 OF 2 SCAPLUS COPYRIGHT 2019 ACS on STN   (Continued)

(Registry number list — three columns; e.g. 711003-56-4V, 711003-57-5V, 711003-58-6V …)

RL: BAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of nitrogen-contg. heterocyclic compds. as CXCR4 antagonists for prepn. and treatment of diseases)

IT *(Registry number list — three columns)*

L12 ANSWER 2 OF 2 SCAPLUS COPYRIGHT 2009 ACS on STN   (Continued)

ONC 8 4   THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (8 CITINGS)
R& CNT 7   THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
          ALL CITATIONS AVAILABLE IN THE RE SUMMARY

L12 ANSWER 2 OF 2 SCAPLUS COPYRIGHT 2009 ACS on STN   (Continued)

(Registry number list — three columns)

RL: BAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of nitrogen-contg. heterocyclic compds. as CXCR4 antagonists for prepn. and treatment of diseases)

IT 711002-73-2V
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of nitrogen-containing heterocyclic compds as CXCR4 antagonists for preparation and treatment of diseases)

IT 710078-29-8V
RL: BAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of nitrogen-containing heterocyclic compds as CXCR4 antagonists for preparation and treatment of diseases)

RN 710078-29-8 SCAPLUS
CN 2-Pyrimidinamine, N-[(1S)-[1,1'-biphenyl]-3-yl-4-(hexahydro-1H-azepin-1-yl)- (CA INDEX NAME)

Absolute stereochemistry.

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-> d his

     (FILE 'HOME' ENTERED AT 11:31:18 ON 01 SEP 2009)

     FILE 'ZCAPLUS' ENTERED AT 11:32:20 ON 01 SEP 2009
L1           1 US20070167459 /PN

     FILE 'REGISTRY' ENTERED AT 11:32:34 ON 01 SEP 2009

     FILE 'ZCAPLUS' ENTERED AT 11:32:34 ON 01 SEP 2009
L2           TRA L1 1- RN :    1829 TERMS

     FILE 'REGISTRY' ENTERED AT 11:32:35 ON 01 SEP 2009
L3        1829 SEA L2
L4        1375 L3 AND NC6/ES AND NCNC3/ES
L5        1265 L4 AND (>=2 NC6/ES OR (NC3 OR NC4 OR NC5)/ES)
L6             STR
L7       10275 (NC6 AND NCNC3)/ES
L8        1375 L7 AND L3
L9          50 L6 SAM SUB-L8
L10       1367 L6 FULL SUB-L8
               SAV TEM J758CGRCE/A L10
L11       1367 L10 AND L3

     FILE 'ZCAPLUS' ENTERED AT 13:13:32 ON 01 SEP 2009
L12          2 L11

=>
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